

Research Article

AI-enhanced self-regulated learning: EFL learners' prioritization and utilization in presentation skills development

Sri Wuli Fitriati¹ and Aldha Williyani²

¹Universitas Negeri Semarang, Indonesia (ORCID: 0000-0002-6405-1371)

²Universitas Siliwangi, Tasikmalaya, Indonesia (ORCID: 0009-0009-0953-8441)

This research investigates the use of artificial intelligence (AI) tools by Indonesian EFL learners to enhance their presentation skills through self-regulated learning. With the rapid advancement of AI technologies, their integration into educational practices has become increasingly significant, particularly in developing essential skills like presentation delivery. This study aims to explore how Indonesian EFL learners prioritize specific aspects of presentation skills and how AI tools facilitate their self-regulated learning processes. Employing a qualitative approach, semi-structured interviews and focus group discussions were conducted with twelve participants to gather in-depth insights into their experiences and perceptions regarding AI tools. Findings indicate that learners prioritize pronunciation clarity, persuasive topic development, fluent coherence, precise lexical usage, and grammatical accuracy as essential components for effective presentations. Participants reported valuing AI for its ability to provide personalized feedback and improve learning efficiency. This research underscores the potential of AI technologies in enhancing language learning and presentation skills, suggesting that educational practices should integrate AI-supported interventions to boost learners' competence and confidence in public speaking.

Keywords: AI-enhanced learning; EFL learners; Educational technology; Presentation skills; Self-regulated learning

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1. Introduction

The rapid advancement of artificial intelligence [AI] technologies has revolutionized various sectors, including education. In the context of English as a Foreign Language [EFL] learning, AI tools offer innovative ways to enhance the learning experience, particularly in developing presentation skills, which are critical for academic and professional success (Liu et al., 2024; Ulla et al., 2023). Self-regulated learning, where learners take control of their own educational processes, is increasingly recognized as an effective approach to mastering complex skills. AI-enhanced tools can support self-regulated learning by providing personalized feedback, interactive practice opportunities, and adaptive learning paths (Dahri et al., 2024; Malik et al., 2023; Zhang et al., 2024). This study focuses on Indonesian EFL learners, a group that faces unique challenges due to language barriers and varying levels of access to quality educational resources. By examining how

Address of Corresponding Author

Aldha Williyani, Faculty of Teacher Training and Education, Universitas Siliwangi, Jl. Siliwangi No.24, Kahuripan, Kec. Tawang, Kab. Tasikmalaya, Jawa Barat.

✉ alwilliyani@unsil.ac.id

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these learners prioritize and utilize AI tools in their self-directed learning of presentation skills, this research aims to contribute valuable insights into the effectiveness of AI in EFL education.

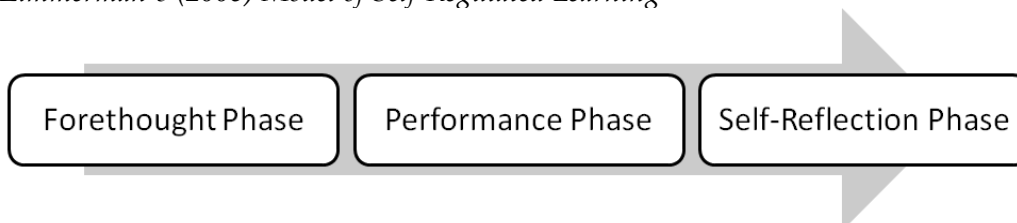
Indonesian EFL learners often encounter difficulties in developing presentation skills, which require a combination of language proficiency, confidence, and the ability to engage an audience. Traditional classroom settings may not provide sufficient opportunities for individualized practice and feedback, making it challenging for learners to improve their presentation abilities autonomously (Lapitan et al., 2023; Sybing, 2021). AI tools, such as speech recognition software, virtual presentation platforms, and AI-driven feedback systems, offer potential solutions by enabling learners to practice and refine their skills independently (Chen, 2022; Ericsson & Johansson, 2023; Kshetri, 2024; Law, 2024). This research seeks to explore which aspects of presentation delivery Indonesian EFL learners prioritize when using these AI tools and how they integrate these technologies into their self-regulated learning processes. Understanding these dynamics will help educators and developers design more effective AI-enhanced learning environments that address the specific needs of EFL learners, ultimately improving their presentation skills and overall language competence.

1.1. Self-Regulated Learning Model

In Zimmerman's (2008) model of self-regulated learning, the forethought phase constitutes the foundational stage for effective learning (see Figure 1). During this phase, learners engage in proactive behaviours, such as goal-setting, wherein they delineate specific objectives to steer their learning trajectory. Strategic planning is also a critical component of this phase, as learners map out the steps and resources required to attain their goals (Ebbes et al., 2024; Teng & Zhang, 2023). Furthermore, this phase involves the activation of prior knowledge, enabling learners to integrate new information with pre-existing understanding, thereby promoting deeper comprehension and retention (Dahri et al., 2024). By participating in these preparatory activities, learners establish clear intentions and devise a structured roadmap for their learning process, thereby enhancing the likelihood of successful outcomes.

Figure 1

Zimmerman's (2008) Model of Self-Regulated Learning



The performance phase in Zimmerman's model (2008) is characterized by active engagement in the learning task. During this phase, learners implement the strategies and utilize the resources planned during the forethought phase. Continuous self-monitoring is a critical component of this phase, as learners assess their comprehension, skill acquisition, and task completion (Apridayani et al., 2023). This ongoing evaluation enables learners to identify obstacles and challenges, facilitating timely adjustments to their approach. Additionally, learners employ metacognitive strategies, such as self-questioning and self-explanation, to enhance their understanding and mastery of the material (Henry & Liu, 2024; Yabukoshi, 2023; Teng & Yang, 2023). Through the active management of their learning process during the performance phase, learners assume responsibility for their education and develop effective learning habits.

Upon the completion of the learning task, learners transition into the self-reflection phase, where they critically evaluate their performance and learning outcomes. In this phase, learners assess their progress towards their goals, considering both their achievements and areas necessitating improvement (Zimmerman, 2008). This self-assessment process enables learners to identify effective strategies that contributed to their success and pinpoint areas requiring adjustment for future endeavours (Dahri et al., 2024; Radović et al., 2024). Additionally, self-

reflection fosters the cultivation of a growth mindset, wherein challenges and setbacks are perceived as opportunities for learning and development (Teng et al., 2024; Wang et al., 2023). By engaging in comprehensive self-reflection, learners can refine their learning strategies, enhance their metacognitive awareness, and promote continuous improvement in their academic pursuits.

1.2. Spoken Language Components in Presentation Delivery

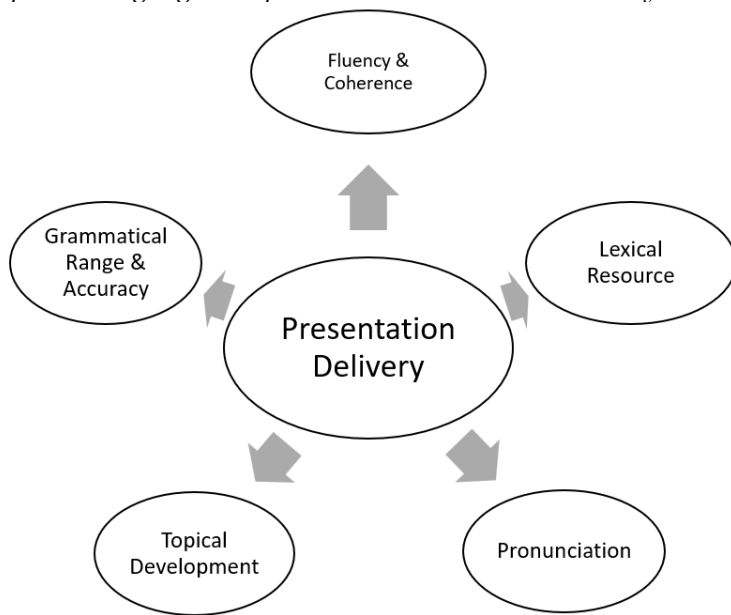
In addition to Zimmerman's model of self-regulated learning, this research also draws on the theoretical framework provided by Lucas (2023) regarding the components of spoken language in presentation delivery. Lucas' theory delineates five critical components: fluency and coherence, lexical resource, grammatical range and accuracy, pronunciation, and topic development (see Figure 2). These components collectively contribute to the overall effectiveness of oral presentations, particularly in the context of English as a Foreign Language learners.

Fluency refers to the smoothness and flow of speech, while coherence pertains to the logical organization and clarity of ideas. According to Lucas (2023), fluency is characterized by the speaker's ability to maintain a steady pace, minimize pauses, and articulate thoughts seamlessly. Coherence involves structuring the presentation in a way that ensures the audience can easily follow the progression of ideas. Effective fluency and coherence are crucial for engaging the audience and conveying the message clearly, thus forming the bedrock of successful spoken communication (Masuram & Sripada, 2020). Lexical resource refers to the range and appropriateness of vocabulary used by the speaker. Lucas (2023) emphasizes the importance of a rich and varied vocabulary in enhancing the precision and expressiveness of the presentation. EFL learners, in particular, must develop a robust lexical repertoire to effectively convey complex concepts and respond to audience interactions (García-Sánchez, 2022; García-Pinar, 2019). Mastery of lexical resources enables speakers to avoid repetition, use idiomatic expressions appropriately, and adapt their language to different contexts and audiences.

Grammatical range and accuracy involve the use of a variety of grammatical structures and the correctness of their application. Lucas (2023) highlights that a wide grammatical range allows speakers to express ideas more complexly and nuancedly, while grammatical accuracy ensures that these ideas are communicated clearly and professionally. For EFL learners, developing grammatical proficiency is essential to avoid misunderstandings and maintain the credibility of their presentations (Xing & Turner, 2020). This component is particularly challenging for non-native speakers but is crucial for achieving fluency and coherence. Pronunciation encompasses the clarity and correctness of spoken language sounds, including aspects such as intonation, stress, and rhythm. According to Lucas (2023), effective pronunciation is essential for intelligibility and helps to maintain audience engagement. Pronunciation errors can lead to misunderstandings and detract from the overall effectiveness of the presentation (Fitriati & Rata, 2021; Jing, 2024). EFL learners must therefore focus on refining their pronunciation to ensure that their speech is easily comprehensible to native and non-native listeners alike. Topic development pertains to the depth and breadth with which a subject is explored and presented. Lucas (2023) asserts that effective topic development involves providing a comprehensive overview of the subject, presenting evidence and examples, and elaborating on key points to enhance understanding. This component requires speakers to engage in thorough preparation and critical thinking to deliver a presentation that is informative, persuasive, and engaging (Crew & Martins, 2023; Gronseth & Bauder, 2022). For EFL learners, developing skills in topic development involves not only linguistic proficiency but also the ability to organize and present information logically and compellingly.

Incorporating Lucas' (2023) theory of spoken language components into the study provides a comprehensive framework for analysing the presentation skills of Indonesian EFL learners. By focusing on these five components, the research aims to identify specific areas where AI tools can support and enhance learners' self-regulated development of presentation skills. This theoretical

Figure 2
Spoken Language Components in Presentation Delivery



foundation, combined with Zimmerman's model of self-regulated learning, offers a robust basis for understanding the interplay between linguistic proficiency and self-regulation in the context of EFL learning.

1.3. Previous Studies and Gaps Identification

A comprehensive review of recent studies in AI-enhanced language learning reveals notable progress, particularly in the integration of AI tools to improve EFL learners' speaking proficiency and engagement. For instance, Meşe and Mede (2023) demonstrated the significant impact of differentiated instruction on speaking skills, while Zhang et al. (2024) and Zou et al. (2023) investigated the role of AI-driven technologies in fostering supportive classroom environments and learner acceptance of AI tools. Moreover, Yang et al. (2024) highlighted the role of community support in enhancing teacher self-efficacy with AI integration, and Chen (2022) found that VR-facilitated learning could reduce public speaking anxiety. Meanwhile, Fathi et al. (2024) demonstrated the positive effects of AI-mediated speaking activities on speaking skills and willingness to communicate [WTC]. Similarly, Shafiee Rad (2024) showed that the Speeko AI application significantly improved L2 speaking proficiency and learner perceptions. Ericsson and Johansson (2023) further illustrated how conversational AI positively influenced student engagement and slightly improved educational experiences in a Swedish language context. These studies collectively underscore the growing potential of AI technologies to enhance speaking proficiency, foster learner autonomy, and increase positive attitudes toward AI-mediated language learning.

Despite these contributions, a critical gap remains in the literature regarding the specific context of Indonesian EFL learners and their use of AI tools to autonomously develop presentation skills through self-regulated learning [SRL]. While existing research has predominantly focused on improving general speaking proficiency and learner engagement, little attention has been given to how learners in Indonesia utilize AI technologies for autonomous skill development in presentation contexts. Addressing this gap is essential for advancing both theoretical and practical understanding of AI integration in EFL instruction, particularly in relation to fostering SRL strategies. To fill this gap, two research questions were formulated:

RQ 1) Which aspects of presentation delivery do Indonesian EFL learners prioritize when utilizing AI tools in their self-directed learning of presentation skills?

RQ 2) How do Indonesian EFL learners utilize artificial intelligence as supportive tools in facilitating their self-regulated development of presentation skills?

2. Method

2.1. Study Context and Participants

This research employs a qualitative case study approach, involving 12 Indonesian EFL learners, coded as S1-S12, who have used AI tools to enhance their presentation skills. The participants were selected to provide diverse insights into their experiences with self-regulated learning and the specific aspects of presentation skills they prioritize and utilize. Table 1 outlines the criteria for participant selection to ensure a comprehensive understanding of the research focus.

Table 1

Participants Selection Criteria

Criteria	Description
English Proficiency Level	Participants must have a minimum intermediate English proficiency (B1 or above based on CEFR).
EFL Learners	Participants must be learners of English as a Foreign Language (EFL) in an Indonesian context.
Experience with AI Tools	Participants must have prior experience using AI tools for learning or presentations (e.g., Grammarly, speech-to-text apps).
Age Group	Participants are aged 18-25 years.
Prior Presentation Experience	Participants must have completed at least two formal presentations in English (e.g., academic or professional).
Willingness to Participate	Participants must voluntarily agree to take part in semi-structured interviews and focus group discussions.
Access to AI Tools	Participants must have regular access to AI-enhanced learning tools (through devices like smartphones or computers).

The criteria outlined in the table provide a structured framework for selecting participants, ensuring that the study captures a range of perspectives on the integration of AI tools in language learning. By focusing on learners who have actively engaged with these technologies, the research aims to uncover valuable insights into their prioritization of presentation skills and the role of self-regulated learning in their development.

2.2. Methods of Data Collection and Analysis

The first phase of data collection involved conducting semi-structured interviews with 12 participants. These interviews were designed to elicit detailed insights into participants' experiences, perspectives, and knowledge relevant to the research topic. The use of semi-structured interviews allowed for flexibility in probing deeper into key themes while ensuring consistency across participants. The protocol for the interviews is outlined in Table 2.

Building on the initial interview findings, the second phase involved a focus group discussion [FGD]. The focus group facilitated interactive dialogue, enabling participants to discuss, compare, and reflect on the issues identified during the interviews. This method was employed to triangulate and validate the initial findings while enriching the data through group dynamics and collective perspectives. The protocol for the focus group discussions is presented in Table 3.

The data collected from interviews and focus group discussions were transcribed verbatim for accuracy and analyzed using qualitative analysis software. The analysis commenced with open coding to identify key themes, followed by axial coding to group related codes into broader categories. A thematic analysis, as outlined by Braun and Clarke (2021), was used to interpret recurring patterns and unique insights within the data. To validate the findings, member checking

Table 2
Interview Protocol

<i>Component</i>	<i>Description</i>
Purpose	To explore participants' experiences and perceptions regarding the use of AI tools in developing presentation skills through self-regulated learning strategies.
Participants	Twelve Indonesian EFL learners with varying levels of experience in utilizing AI tools for presentation skills development.
Interview format	Semi-structured format, allowing for flexibility in questioning and follow-up prompts based on participants' responses.
Duration	Each interview lasted approximately 30-45 minutes, providing ample time for in-depth discussion.
Location	Conducted in a comfortable and quiet environment, either in person or via a virtual platform, to encourage open dialogue.
Interview guide	A set of predetermined questions focusing on key themes such as pronunciation, topic development, fluency, coherence, lexical resources, and grammatical accuracy, with the option to explore additional topics as they arise during the conversation.
Recording and transcription	Interviews were audio-recorded (with participants' consent) and subsequently transcribed for analysis.
Data Analysis	Thematic analysis was employed to identify patterns and themes in participants' responses, contributing to the overall findings of the study.

Table 3
FGD Protocol

<i>Component</i>	<i>Description</i>
Purpose	To gather collective insights from participants regarding their experiences with AI tools in developing presentation skills and to validate and enrich findings from the individual interviews.
Participants	Twelve Indonesian EFL learners, divided into two focus groups of six participants each to facilitate discussion while maintaining manageability.
Discussion format	Guided discussion led by a facilitator, with an emphasis on encouraging interaction among participants and exploring diverse perspectives.
Duration	Each focus group discussion lasted approximately 60-90 minutes, allowing for in-depth exploration of themes.
Location	Conducted in a comfortable and collaborative environment, either in person or via a virtual platform, to foster open dialogue among participants.
Discussion guide	A set of guiding questions based on themes identified in the interviews, focusing on aspects such as challenges faced, benefits of AI tools, and overall experiences with presentation skills development.
Recording and transcription	Focus group discussions were audio-recorded (with participants' consent) and subsequently transcribed for analysis.
Data Analysis	Thematic analysis was used to compare and contrast responses, identify emerging themes, and strengthen the overall findings of the study.

3. Findings

The research findings are divided into two parts, aligned with the research questions. The first part focuses on the prioritized aspects of presentation delivery among Indonesian EFL learners in the context of AI-enhanced self-directed learning, identifying five thematic categories based on the theories of Lucas (2023). The second part examines how Artificial Intelligence tools are used to support and facilitate Indonesian EFL learners' self-regulated development of presentation skills, with three thematic categories emerging, following Zimmerman's (2008) Model of Self-Regulated Learning.

3.1. Indonesian EFL Learners' Prioritized Aspects of Presentation Delivery in AI-Enhanced Self-Directed Learning

The analysis of data from semi-structured interviews and focus group discussions reveals that Indonesian EFL learners recognize the importance of several key components of spoken language for delivering effective presentations. Both the interview and FGD participants emphasized that grammatical range and accuracy are central to clear communication and presentation credibility. A majority of participants expressed that errors in grammar can undermine their confidence and the overall impact of their presentations. For instance, S6 explained in the interview that:

Grammatical errors can make me look less professional, so I always prioritize accuracy when I prepare my presentation. (S6 interview)

This sentiment was echoed during the FGD, where learners agreed that mastering grammar ensures fluency and coherence, allowing them to convey complex ideas more effectively and project greater professionalism. Pronunciation also emerged as a significant theme, with participants regarding it as crucial for audience comprehension, credibility, and engagement. Clear pronunciation helps reduce misunderstandings and enhances the speaker's professional image, especially when presenting to non-native speakers. As some participants shared during the interviews and the FGD:

I slow down and pronounce each word clearly during presentations to help the audience follow, especially non-native speakers. (S2, interview)

Pronunciation isn't just about clarity but also about showing respect for the audience, especially in formal settings. (S3, FGD)

The combined data from both the interviews and FGDs suggest that pronunciation is not only a tool for facilitating understanding but also a means for presenters to establish credibility and maintain their audience's attention. Topic development was also emphasized as a vital component in structuring presentations that are both persuasive and credible. The participants reported in the interviews that a well-structured topic, backed by thorough research, strengthens their ability to persuade and influence the audience. The FGD discussions reinforced this view.

I spend considerable time developing and structuring my presentation topic with compelling evidence, enhancing its persuasiveness and swaying the audience" (S10 interview).

When I organize my topic properly and provide solid evidence, I feel more confident, and the audience is more likely to trust my viewpoint. (S8, FGD)

The synergy between topic development and credibility became evident as learners discussed how thoroughly preparing a presentation topic helps them appear more knowledgeable and authoritative. Fluency and coherence were also highlighted as essential for creating a smooth, engaging presentation experience. Participants consistently expressed the importance of fluency in maintaining audience focus and preventing distractions caused by hesitations or pauses. As one interview participant mentioned:

I practice my presentations repeatedly to ensure fluency, helping the audience follow and understand the content without distraction. (S3 interview)

During the FGD, the participants also discussed how coherence—ensuring ideas are logically connected—facilitates interaction, making it easier for the audience to ask relevant questions and engage more meaningfully.

A coherent presentation structure aids audience engagement and allows them to ask relevant questions and contribute meaningfully. (S7, FGD)

The discussions highlighted that fluency and coherence work in tandem to create a seamless, dynamic, and engaging presentation experience. Additionally, participants recognized the importance of lexical resources, particularly in selecting precise vocabulary and adapting language to the audience's level of understanding. One interview participant (S8) mentioned that he carefully selected his words for clarity and precision, which he believed boosted the credibility of his message. In the FGD, participants elaborated on this point, with some stating:

Choosing the right words helps me bridge the gap between my expertise and the audience's level of understanding, making the presentation more relatable. (S8, FGD)

Adapting my language to the audience's cultural context makes my presentations more inclusive and ensures that no one feels left out. (S12, FGD).

The discussions reinforced the idea that careful selection of vocabulary is essential for clarity, precision, and audience engagement, particularly when presenting to diverse groups. Finally, the FGD illuminated additional nuances about learners' prioritization of presentation components. While grammatical range and accuracy remained the most crucial aspects, participants expressed that topic development and fluency, though secondary, are critical for ensuring the logical flow and coherence of their presentations. This balance of grammar, fluency, and topic structure helps learners feel more confident and better prepared, particularly when using AI tools to enhance their presentation skills.

Overall, the findings demonstrate that learners prioritize grammatical accuracy, topic development, and fluency as key factors in effective presentations. The integration of FGD insights into the interview data further underscores the role of these elements in ensuring clarity, credibility, and audience engagement. These insights provide a deeper understanding of how Indonesian EFL learners navigate the complexities of presentation delivery and offer valuable guidance for developing targeted AI-supported interventions to enhance presentation skills and overall competence.

3.2. The Use of Artificial Intelligence as Supportive Tools in Facilitating Indonesian EFL Learners' Self-Regulated Development of Presentation Skills

The findings from this study highlight the essential role of AI tools in facilitating Indonesian EFL learners' self-regulated development of presentation skills. By analyzing their learning process in three distinct phases—Forethought, Performance, and Self-Reflection—learners utilized AI to support various aspects of their preparation and delivery. For instance, some respondents leveraged AI-based platforms like ChatGPT and Deep AI to brainstorm unique presentation topics and expand their vocabulary. As the participants noted:

I used AI tools like ChatGPT and Gemini to brainstorm unique angles for my presentation topic. (S2 interview).

AI tools such as Deep AI and Freedev AI helped me expand my vocabulary with synonyms and related terms. (S6 interview)

These AI-driven interventions provided personalized, real-time feedback and resources that learners used to refine both their content and delivery. During the focus group discussion, several participants echoed the importance of AI tools in this phase, emphasizing how AI expanded their creativity and critical thinking during topic selection and content development. One participant mentioned:

AI helped me explore ideas I hadn't considered before, making my presentations more dynamic and engaging. (S3, FGD)

Table 3 presents a concise summary of the specific activities participants engaged in during each phase of their self-regulated learning process. As demonstrated in the table, AI tools played a significant role in supporting the learners' self-regulated development, providing substantial assistance across all phases of their learning process. In the Forethought phase, participants used AI to explore various presentation techniques and enrich their vocabulary. Many students found that AI tools, such as Anyquestion AI, were helpful in guiding them through the initial stages of preparation by offering examples of successful presentation styles and strategies.

Table 3

AI Tools Used by EFL Learners in Self-Regulated Presentation Skills Development

<i>Phase</i>	<i>Activity</i>	<i>AI Tools Utilized</i>
Forethought Phase	Studied presentation styles and strategies through video analysis.	Exemplary AI, Anyquestion AI, Vimeo, Askvideo AI
	Searched for unique and engaging presentation topics.	ChatGPT, Gemini
	Enriched vocabulary related to the selected topic.	Deep AI, Fredev AI
	Conducted literature searches to build content knowledge.	Open Knowledge Maps, Connected Papers, Inciteful, Litmaps, Research Rabbit
	Studied and annotated literature with AI assistance.	Perplexity, Coral AI, Chat PDF, PDF AI, ChatDOC
Performance Phase	Recorded presentations and used AI tools for speech analysis and feedback.	Orai, Elsa Speech Analyzer, IBM Watson Speech to Text, Speechnotes
	Recorded presentations and shared with peers for constructive feedback.	Not specified (Peer feedback via recordings)
	Recorded presentations and received teacher feedback on content and delivery.	Not specified (Teacher feedback via recordings)
	Practiced public speaking in English clubs to enhance fluency and confidence.	Not specified (English clubs for practice)
Self-Reflection Phase	Improved pronunciation using AI-based feedback tools.	Elsa Speak, Duolingo, Cambridge Dictionary, GetPronounce
	Enhanced grammatical accuracy and clarity in presentations through real-time corrections.	Grammarly, Duolingo
	Expanded topic-related vocabulary for presentations.	Duolingo, Vocabulary.com
	Improved fluency through personalized AI-driven exercises.	Elsa Speak, Duolingo, Speechace
	Used AI tools to assess overall speech fluency, including pronunciation, intonation, and pacing, with real-time feedback.	Speechace

As one participant explained during the interview, using AI allowed them to model their approach after expert speakers:

I analyzed how speakers opened and closed their presentations and interacted with the audience using Anyquestion AI, applying these techniques to my own presentations. (S5 interview)

This initial guidance, combined with vocabulary enrichment features, equipped the learners with a deeper understanding of how to structure their presentations more effectively. During the focus group discussion, participants reiterated the importance of these tools, highlighting that personalized feedback from AI helped them refine their presentation techniques and improve their overall preparedness. One participant shared how AI provided objective evaluations of their strengths and areas for improvement, enabling them to adapt their approach:

AI allowed me to evaluate my strengths and weaknesses objectively, which was crucial for improving my overall delivery. (S11, FGD)

This ability to assess themselves critically before the actual performance gave them confidence and a clearer focus on areas that needed more attention. In the Performance phase, participants engaged in active practice by recording their presentations and using AI tools to analyze their performance. Tools like Elsa Speech Analyzer and Orai offered detailed, data-driven feedback on aspects such as tone, speed, and delivery. One participant reflected on the benefits of these insights, emphasizing how AI could pinpoint specific aspects of their speech that needed improvement:

Orai's feedback on my tone, speed, and delivery was invaluable, offering specific improvement suggestions. (S8 interview)

In addition to AI, peer and teacher feedback played a critical role in complementing the AI-generated insights. Several participants in the FGD noted that combining human and technological feedback created a more comprehensive framework for improving their skills. One learner explained how AI and peer feedback worked hand-in-hand to address both technical and creative aspects of their presentation:

The feedback from my peers was useful, but combining it with AI analysis helped me focus on both the technical and creative aspects of my presentation. (S12, FGD)

This collaborative approach provided learners with a well-rounded view of their progress, offering insights from multiple perspectives, which enriched their learning experience. The Self-Reflection phase marked the final stage in the learners' process, where they used AI tools to focus on refining specific skills like pronunciation and fluency. For instance, many participants utilized Elsa Speak's interactive exercises and personalized learning plans, which provided instant feedback on pronunciation errors. As one participant highlighted during the interview:

Elsa Speak's personalized learning plans and instant feedback on pronunciation errors were incredibly helpful. (S6 interview)

This phase was crucial for developing a more refined and confident presentation style. In the FGD, participants expressed how AI tools enabled them to monitor their progress and track their improvements over time. One respondent shared how this continuous monitoring helped them become more self-aware of their learning trajectory:

AI tools made it easier to track my progress over time, and that helped me understand where I was improving and where I needed more practice. (S1, FGD)

These reflections underscore the value of AI in promoting self-awareness and self-regulation, allowing learners to systematically enhance their presentation skills through personalized, targeted feedback and continuous support.

4. Discussion

The findings of this study underscore the paramount importance of pronunciation in effective presentation delivery among Indonesian EFL learners. Pronunciation was highlighted as a critical component, aligning with Lucas' (2023) components of spoken language in presentation delivery. This emphasis on pronunciation resonates with previous studies that have documented its significant impact on audience comprehension, engagement, and overall impression of the speaker (Fitriati & Rata, 2021; Whitehead & Ryu, 2023). Clear pronunciation ensures that the audience can easily understand the presented content, which is crucial for maintaining engagement and preventing misunderstandings (Shafiee Rad, 2024). The respondents' focus on pronunciation to enhance their credibility and professionalism also aligns with previous research that links accurate pronunciation with the perception of a speaker's competence and authority (Nguyen & Hung, 2021). By practicing difficult words and aiming for precise articulation, respondents demonstrated their commitment to professionalism, thereby enhancing their audience's trust and respect. This finding supports the notion that effective pronunciation is not merely a linguistic skill but a professional asset that can significantly influence audience perception.

The study reveals that Indonesian EFL learners prioritize well-structured topic development to construct persuasive arguments, thereby aligning with existing literature on the importance of organization in enhancing the persuasive impact of presentations (Lucas, 2023). Systematic organization of supporting evidence, examples, and anecdotes helps presenters fortify their stance and influence the audience's perspective. This finding is consistent with earlier studies that highlight the role of coherent topic development in establishing the speaker's credibility and authority (Harrison, 2021). Moreover, the emphasis on topic development to demonstrate authenticity and expertise supports previous research suggesting that thorough preparation and in-depth understanding of the subject matter enhance the speaker's authenticity (Burton, 2020). The respondents' commitment to conducting thorough research and structuring their arguments meticulously reflects their effort to establish themselves as knowledgeable and trustworthy

sources of information. This approach not only bolsters their credibility but also fosters a deeper connection with the audience, as noted in earlier studies.

Fluency and coherence emerged as crucial factors for effective presentation delivery, as they facilitate audience comprehension and interaction. This finding aligns with previous studies that emphasize the importance of a smooth flow and logical structure in presentations (Fathi et al., 2024; Masuram & Sripada, 2020; Tilwani et al., 2022). Fluency ensures that the presentation proceeds without awkward pauses, maintaining audience focus and aiding in content comprehension. Coherence, on the other hand, ensures that ideas are presented logically, enabling the audience to grasp the connections between different points (Khalifa & Albadawy, 2024). The respondents' efforts to practice their presentations multiple times to ensure fluency and coherence reflect the importance of preparation in enhancing presentation skills. This practice aligns with research that highlights the role of rehearsal in improving presentation delivery (Xiuwen & Razali, 2021). Additionally, as stated by Lee and Yang (2023) the use of structured feedback from peers and teachers to refine fluency and coherence supports the idea that interactive and collaborative learning environments contribute to the development of effective communication skills.

The study highlights the critical role of lexical resources in ensuring clarity and precision in presentation delivery. The respondents' emphasis on using appropriate terminology to articulate ideas accurately and precisely is consistent with previous research that underscores the importance of vocabulary in effective communication (Curry et al., 2024; Teng et al., 2024). Accurate expression through precise vocabulary reduces ambiguity and ensures that the audience comprehends the intended message without confusion. Moreover, the adaptability of language to match the audience's knowledge level and interests further enhances engagement and comprehension, supporting the findings of earlier studies on audience adaptation (Du & Man, 2022; Salem, 2019). The respondents' efforts to incorporate cultural sensitivity in their language selection reflect an awareness of the diverse backgrounds of their audience, which is crucial for fostering an inclusive and respectful environment (Pantić et al., 2022). This approach aligns with research that highlights the importance of cultural sensitivity in enhancing cross-cultural communication (Shen, 2022).

The study reveals that grammatical range and accuracy are top priorities for Indonesian EFL learners, highlighting the fundamental role of grammar in clear and effective communication. This emphasis on grammar aligns with previous research that identifies grammatical proficiency as a key indicator of language competence (Lerdpaisalwong et al., 2023). Mastery of diverse grammatical structures enables learners to convey complex ideas and nuances, which are essential in both academic and professional contexts. The findings also indicate that the use of AI tools significantly supports learners in improving their grammatical accuracy and overall presentation skills (Khalifa & Albadawy, 2024). This aligns with recent studies that highlight the potential of AI technology in facilitating language learning and self-regulation (Cai et al., 2023; Hsu et al., 2023; Zhou et al., 2024). By providing real-time corrections and personalized feedback, AI tools help learners identify and address their grammatical errors, thereby enhancing their confidence and credibility as presenters.

The study demonstrates the extensive use of AI tools by Indonesian EFL learners to enhance their self-regulated learning in the development of presentation skills. This finding is consistent with previous research that highlights the transformative impact of AI technology on educational practices (Clegg & Sarker, 2024; North et al., 2024; Shamsuddinova et al., 2024; Williyan et al., 2024). AI-based tools support learners in various stages of the learning process, from topic selection and vocabulary enrichment to performance analysis and feedback, thereby facilitating a comprehensive and multifaceted approach to skill development (Geng, 2024; Jeon, 2024; Kohnke et al., 2023). The respondents' use of AI tools in the forethought phase to generate ideas, enrich vocabulary, and conduct literature reviews reflects the potential of these technologies to enhance preparatory activities. This finding aligns with studies that emphasize the role of AI in supporting knowledge acquisition and critical thinking (Khalifa & Albadawy, 2024; Radanliev, 2024; Seo et al.,

2024). Additionally, the use of AI tools in the performance phase to analyze presentation delivery and receive data-driven feedback underscores the value of technology in providing objective insights and personalized recommendations.

5. Conclusion

The key findings indicate that AI technologies significantly enhance learners' skills in pronunciation, topic development, fluency, coherence, lexical resources, and grammatical accuracy. Tools like Elsa Speak improve pronunciation for better audience comprehension, while AI suggestions strengthen topic persuasiveness and credibility. AI feedback fosters fluency and coherence, ensuring clear communication and professionalism, ultimately enhancing learners' effectiveness as presenters. The findings highlight AI's transformative role in promoting self-regulated learning. By offering real-time corrections and personalized feedback, AI tools empower learners to improve their grammatical accuracy, vocabulary, and presentation skills, boosting their confidence and autonomy in language learning.

This study expands on existing research by demonstrating how AI can enhance language proficiency and presentation skills in EFL contexts, providing valuable insights into the benefits of technology-assisted learning. The research focused on specific AI tools for presentation skills, which may not represent the full range of AI technologies available to learners, potentially limiting the findings' applicability to other tools or contexts. Future studies should explore a wider range of AI tools and their effectiveness across various language skills and contexts. Larger sample sizes and longitudinal designs can enhance the generalizability of findings. Additionally, investigating how different AI technologies can be tailored for diverse educational settings will provide valuable insights. In conclusion, this research adds to the understanding of AI's role in language learning by highlighting its potential to enhance EFL learners' presentation skills. As AI becomes more integrated into education, it is crucial for educators to explore its diverse applications, ensuring learners develop essential communication skills for the future.

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